

# PATENT ABSTRACTS OF JAPAN

(11) Publication number : 05-105730  
 (43) Date of publication of application : 27.04.1993

(51) Int.CI.

C08F220/36

C09K 9/02

C09K 19/38

G03C 1/73

(21) Application number : 03-294796

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(22) Date of filing : 16.10.1991

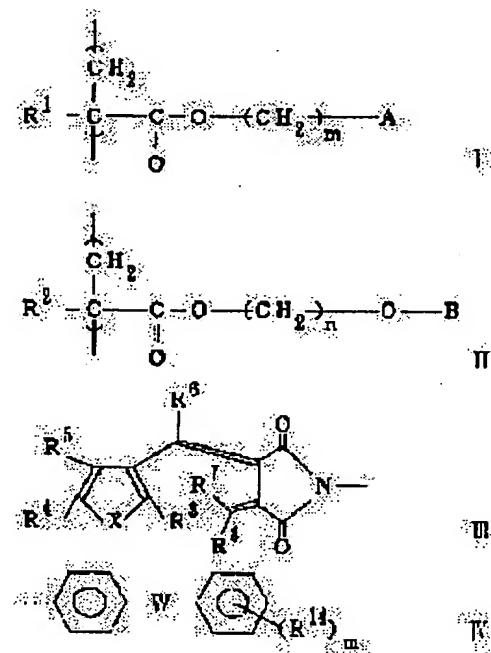
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## (54) PHOTOCROMIC LIQUID CRYSTAL COPOLYMER

### (57) Abstract:

**PURPOSE:** To provide the subject new copolymer composed of two specified monomer units, having a specified weight-average molecular weight, containing a specified amount of a fulgide-containing monomer and useful as an optical recording material, a display material, etc.

**CONSTITUTION:** The objective copolymer is composed of monomer units of formulae I and II [R<sub>1</sub> and R<sub>2</sub> are H or methyl; (m) and (n) are 2-30; A is formula III [R<sub>3</sub>-R<sub>8</sub> are H, halogen or 1-10C alkyl; X is O, S, N-R<sub>13</sub> (R<sub>13</sub> is H, 1-10C alkyl or phenyl which may be substituted)], etc.; B is formula IV (W is single bond, N=N, etc.; R<sub>14</sub> is alkoxy, halogen, etc.; (m) is 1-5)], having 1000-1000000 weight-average molecular weight and containing 0.1-50wt.% monomer unit of the component (A). In addition, this polymer is obtained by free radical polymerization of a (meth) acrylic acid monomer having a fulgide of the component (A) and another (meth)acrylic acid monomer having a mesogen of the component (B) in the presence of a polymerization initiator in a solvent such as THF.



### LEGAL STATUS

[Date of request for examination] 12.09.1995

[Date of sending the examiner's decision of rejection] 16.12.1997

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]